



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants: Nita Mody  
Serial No.: 10/806,711 Art Unit: 1743  
Confirmation No.: 2665  
Filing Date: March 23, 2004  
Title: WETNESS INDICATOR  
Examiner: Yelena G. Gakh  
Docket No.: 36554US1

APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
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Sir:

Applicant submits the attached Appeal Brief in  
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Joseph J. Corso

Name of Attorney for Applicant(s)

10/18/2006

Date

Signature of Attorney

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**Real Party in Interest (37 CFR § 41.37(c)(1)(i))**

The real party in interest in the present appeal is Precision Laminates Inc., a corporation of Delaware.

**Related Appeals and Interferences (37 CFR § 41.37(c)(1)(ii))**

None.

**Status of Claims (37 CFR § 41.37(c)(1)(iii))**

Claims 35, 43, 46 and 51-59 stand rejected. All other claims (1 - 34, 36-42, 44, 45 and 47-50) have been cancelled.

**Status of Amendments (37 CFR § 41.37(c)(1)(iv))**

No amendment has been filed subsequent to the latest final rejection.

**Summary of Claimed Subject Matter (37 CFR § 41.37(c)(1)(v))**

The subject matter of claim 35 is a wetness indicator of the type frequently used in connection with disposable diapers for monitoring the presence of a fluid in an environment. The wetness indicator 18 comprises first and second ink layers (page 5, lines 26-28, Fig. 2, layers 20 and 22). The first ink layer 20 is disposed between the environment and the second ink layer 22 to control fluid

contact with at least a portion of the second ink layer 22.

("Layers printed with such inks could be continuous or

discontinuous in the form of separated dots as is common with current process print technology." Page 7, line 33 to page 8, line 3.) The second ink layer 22 contains a pH indicating agent 24 (page 4, lines - 15, Fig. 2, element 24). At least one of the first and second ink layers contains a fluid regulating additive 26 (page 11, line 16 to page 12, line 3, Fig. 2, element 26). The fluid regulating additive is selected from the group consisting of silica gel, superabsorbent polymers, cellulosic resins, anhydride resins, polyolefin blend resins, zeolites, calcium oxide, clays and calcium sulfate.

**Grounds of Rejection to be Reviewed on Appeal (37 CFR § 41.37(c)(1)(vi))**

Ground No. 1: Whether the specification complies with 35 USC 112, first paragraph.

Ground No. 2: Whether claim 51 is unpatentable under 35 USC 112, first paragraph, as not being enabled.

Ground No. 3: Whether claims 35, 43, 46-47 and 51-59 are unpatentable under 35 USC 112, second paragraph, as being indefinite.

Ground No. 4 Whether claims 35 and 43 are unpatentable under 35 USC 102(b) as anticipated by Allan et al.

Ground No. 5: Whether claims 46-47 and 52-59 are unpatentable under 35 USC 103(a) over Allan et al. in view of Furio et al. or Guarracino et al.

\* \* \* \* \*

Argument (37 CFR § 41.37(c)(1)(vii))

Response to Ground No. 1 (Specification)

The Examiner's position is based on 35 USC 112, first paragraph, and the merits of unidentified claims. However, the comments indicate that non-enabled embodiments refer to "fluid barrier layers, which are not permeable to the fluid to be detected". In Ground No. 2, this same limitation is noted in claim 51 and the claim is rejected for lack of enablement.

The foregoing objection was reviewed in a telephone conference on October 3, 2006 with the Examiner's Supervisory Primary Examiner, Jill A. Warden, for Group Art Unit 1743. Ms. Warden confirmed that this rejection merely requires response to the enablement rejection as issued in connection with claim 51.

Response to Ground No. 2 (Claim 51)

The rejection of this claim under 35 USC 112, first paragraph, is in error since the Examiner incorrectly construes this claim and argues:

"Claim recites the first layer being impermeable to the fluids, which disables the wetness indicator, since the fluids cannot reach the pH indicator."

The argument erroneously assumes that the second layer containing the pH indicating agent is fully surrounded or enclosed by the fluid impermeable second layer. This is not true.

Claim 51 depends from claim 35 which recites that "said first ink layer being disposed between said environment and said second ink layer to control fluid contact with at least a portion of the second ink layer". Clearly, the remaining portion of the first ink layer may be contacted by the environment.

It is fundamental that the invention to be enabled is that defined by the particular claim or claims of the patent. *Phillips Petroleum Co. v. U.S. Steel Corp.*, 673 F. Supp. 1278, 6 USPQ2d 1065 (D. Del. 1987), aff'd, 865 F.2d 1247, 9 USPQ2d 1461 (Fed. Cir. 1989); *Ex parte Erlich*, 3 USPQ 1011, 1014 Bd. Pat. App. & Int'f 1987). In the present case, the Examiner's position is not consistent with claim 51 and there is no claim of record supporting the Examiner's position.

Response to Ground No. 3 (Claims 35, 43, 46-47 and 51-59)

The Examiner initially challenges the recitation of first and second ink layers in claim 35 by reference to citations that confirm that an ink layer is (1) composed of waxes, resins or a combination of both or (2) a layer comprising ink. In a like manner, the present application confirms at page 7, line 25 that "The ink or coating layer may be formed of polymers and/or resins".<sup>1</sup> Accordingly, applicant has taught and enabled ink layers and is entitled to a proper reading of the ink layer recitations as set forth in the claims.

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<sup>1</sup>Ink formulations are specifically illustrated at pages 16 and 17 of application. These are pH indicating inks containing customary polymers and/or resins, and fluid regulating additives in accordance with the invention.

The Examiner's further comments as to the utility of the ink layer in the claimed invention have nothing to do with the definiteness of the claim or with the definition of an ink layer. In any case, the comments do not recognize the teachings of the invention including modification of inks to contain fluid regulating additives.

Thereafter, the Examiner acknowledges that claim 35 requires that the first ink layer "control fluid contact with at least a portion of the second ink layer". After acknowledging the correct claim recitation, the Examiner then raises the hypothetical:

"Moreover, it is not clear, what does it mean that the first layer controls the fluid contact with 'at least a portion' of the second ink layer, if the first and second layers have total contact with each other?"

This is a non-issue since there is no claim recitation of "total contact" and the Examiner has not defined or explained such phrase.

On the other hand, the application does specifically teach at page 7, line 32, to page 8, line 3:

"As in the case of a polymer layer, the ink layer may be impermeable to the fluid or permeability may be achieved by microporosity or a fluid regulating additive contained in the ink layer. Layers printed



with such inks could be substantially continuous or discontinuous in the form of separated dots as is common with current print technology."

In the foregoing manner, applicant has taught ink layers formed of polymers or resins, ink layers may be impermeable, ink layers may be permeable through microporosity or fluid additives, and ink layers may be printed in continuous or discontinuous patterns. In the case of the latter, a first ink layer printed on a second ink layer results in control of fluid contact with at least a portion of the second ink layer in accordance with the invention.

In connection with the foregoing claim limitation, the Examiner then asks several questions which appear to be conditioned upon the hypothetical "if the first and second layers have total contact with each other". It is not believed that a response will serve to resolve the issues on appeal since the question is based upon a hypothetical claim limitation.

The Examiner further questions:

"Moreover, the passage reciting that 'at least one of said layers contain a fluid regulating additive to regulate fluid contact with the pH indicator of the second ink layer' raises a question as to what the first ink layer controls, if the fluid

regulating additive is contained only in the second ink layer? How can it function as the fluid controlling layer, if it does not comprise such additive? Moreover, if the second layer comprises both, the pH indicator and a fluid controlling agent, then it is completely unclear as to what is the function of the first ink layer?"

The Examiner does not raise issues of indefiniteness in the foregoing manner, but merely questions the breadth of the claim. As stated in § 2173.04 of MPEP, the breadth of the claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). The scope of the subject matter embraced by the claims is clear, and applicant has not otherwise indicated that she intends the invention to be of a scope different from that defined in the claims.<sup>2</sup> "A claim is indefinite if it's legal scope is not clear enough that a person of ordinary skill in the art could determine whether a particular composition infringes or not." *Geneva Pharmaceutical, Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1384 (Fed. Cir. 2003). It is respectfully submitted that one skilled in the art would understand the

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<sup>2</sup> In this regard, it should be appreciated that the Examiner's comments do not consider or allow for microporosity or discontinuous coatings.

scope of the claims and, in fact, the Examiner appears to clearly understand each of the limitations.

The Examiner's comments as to claim 47 are moot since this claim has been cancelled.

The indefiniteness rejections and supporting comments in respect to claims 55 - 58 are believed deficient on their face. As observed by the Federal Circuit, "In ruling on a claim of patent indefiniteness, a court must determine whether those skilled in the art would understand what is claimed when the claim is read in light of the specification". *Bancorp Service, LLC v. Hartford Life Insurance Co.*, 359 F.3d 1367, (Fed. Cir. 2004). Upon fair consideration, none of the alleged issues in respect to claims 52 - 58 raises a meaningful question of clarity.

The Examiner's comments as to claim 52 do not raise an issue of indefiniteness. It is within the scope of the invention to lessen or delay fluid contact through the use of microporosity, and there is no confusion as to the claim language and the descriptions in the application.

The Examiner's comments in respect to claim 54 are not understood. Claim 54 recites that the second ink layer is a substantially continuous film of polymer. Applicant has disclosed and illustrated ink layers made of polymer. Also, applicant has explained that, "Layers printed with such inks

could be substantially continuous or discontinuous in the form of separated dots as is common with current print technology." (Specification, page 7, line 33 to page 8, line 3.)

The Examiner's comments in respect to claim 55 do not acknowledge the disclosure at page 6, lines 20 - 25 of polymer layers having a weight of from about 2 gsm (grams/meter<sup>2</sup>) to about 105 gsm and a thickness of from a fraction of a mil to about six mils.

The Examiner's comments in respect to claim 56 are not understood. Claim 56 specifies that the second ink layer contains from about 0.1% to about 25% of pH indicating agent based on the weight of the second ink layer. The Examiner's comments appear to challenge as unnecessary the specificity of the claim. For example, it is possible to define the percentage of one component present in a mixture based upon the amount of another component present in the mixture, as opposed to the total weight of the mixture. Herein, claim 56 is specific and forecloses such confusion.

Claim 57 recites that the fluid regulating additive is a zeolite having a pore opening size that restricts the passage of a molecule larger than a water molecule. In response to the Examiner's query as to which molecules that are bigger than the water molecules are meant in the claim,

the claim clearly states that it is the molecules that are bigger than water molecules. In response to the Examiner's query as to which specific pore sizes of zeolites meet the requirement recited in claim, it is submitted that one skilled in the art could readily identify the required pore sizes based on the requirement that the zeolite pore size restrict the passage of a molecule larger than a water molecule.

The Examiner's comments in respect to claim 58 are fully responded to by the foregoing comments in respect to claims 52 - 57.

Response to Ground No. 4 (Claims 35 and 43)

The rejection of claims 35 and 43 under 35 USC 102(b) as being anticipated by Allan et al. is in error. Allan et al. do not teach or suggest the claimed ink layers.

The publication teaches absorbent constructions, such as diapers, having an insult region 12 and a retention region 14 comprising fibrous matrices including two different superabsorbent polymers ("SAPs") segregated or intermixed in a desired distribution.<sup>3</sup> One or both of the SAPs may include a latent indicator that is activated by

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<sup>3</sup>Allan et al. do not describe the fibrous matrix per se but cites US Patent 5,356,403 in paragraph [0013] for the same.

fluid contact to determine the achievement and/or quality of  
~~the desired distribution of SAPs in the fiber matrix regions.~~

In this manner, manufacturing distribution defects may be identified.

It is therefore necessary in Allan et al. to contact all SAPs with fluid in order to determine proper manufacturing distribution of the polymers. It is contrary to the operation and purposes of Allan et al. to control or regulate fluid contact. Fluid contact of all SAPs or polymers is necessary to the invention of Allan et al.

Accordingly, there's no disclosure or suggestion of a wetness indicator to monitor the presence of a fluid in an environment or of ink layers as set forth in claim 35 to determine the presence of fluid. Allan et al. do not disclose the claimed wetness indicator comprising "a multiple layer composite of a first ink layer applied to a second layer, said first ink layer being disposed between said environment and said second ink layer to control fluid contact with at least a portion of the second ink layer". Clearly, such an ink layer composite is not disclosed by Allan et al. and, in fact, such an arrangement is contrary to Allan et al. since it would prohibit the desired verification of manufacture quality via detection of polymer distribution.

The disclosure of overlying layers of fiber matrix regions containing superabsorbent polymers in Fig. 2 of Allan et al. does not teach the claimed ink layers. It is inconceivable that fibrous diaper layers be equated with ink layers under any plausible reading of the application and claims.

Response to Ground No. 6 (Claims 46-47 and 52-59)

The rejection of claims 46 - 47 and 52 - 59 under 35 USC 103(a) as being untenable over Allan et al. in view of Furio et al. or Guarracino et al. is in error for the same reasons set forth above with respect to the rejection of claims 35 and 43. As noted above, claim 47 has been cancelled and it is not addressed herein.

Furio et al. and Guarracino et al. are specifically cited with respect to their teachings of the addition of zeolites as odor controlling additives to fluid retention articles. Accordingly, the patent teachings do not remedy the deficiencies of Allan et al.

Claim 51 is not rejected under 35 USC 103(a) based on prior art teachings. In view of the foregoing remarks overcoming the rejection of this claim under 35 USC 112, first paragraph, this claim is in condition for allowance.

The rejection of claims 52-54, 57 and 59 under 35 USC  
~~103(a) based on prior art teachings is not discussed in the~~  
final rejection. No relevant prior art teachings are cited  
with respect to the subject matter of these claims as  
summarized below.

- Claim 52 recites that the first ink layer is microporous and thereby lessens and/or delays fluid contact with said portion of said second ink layer.

- Claim 53 recites that both the first and second ink layers contain fluid regulating additive.

- Claim 54 recites that the second ink layer is a substantially continuous film of polymer having the pH indicating agent and the fluid regulating additive dispersed therein.

- Claim 57 recites that the fluid regulating additive is a zeolite having a pore opening size that restricts the passage of a molecule larger than a water molecule.

- Claim 59 recites that the fluid regulating additive is a zeolite having a pore opening size that permits the flow of fluid into the second ink layer and restricts the flow of the pH indicating agent from the second ink layer into the environment.



There are no pertinent teachings in Allan et al. that suggest the foregoing recitations and the deficiencies are not remedied by the secondary references.

There is no support for the Examiner's comments that the polymer weight ranges in claims 55 and 58, as well as optimizing the pH indicator weight percentage in claims 56 and 58, are within the skills of the ordinary person in the art. That is, Allan et al.'s fibrous matrices provide no suggestion as to the claimed ink layer weights, thicknesses or pH indicator weight content.

### **Conclusion**

For at least the reasons stated above, applicant's claims represent a new, useful, nonobvious wetness indicator. Accordingly, applicant requests the Board of Patent Appeals and Interferences to reverse the rejection of claims 35, 43, 46 and 51-59 and return the case to the Examiner for issuance of a Notice of Allowability.

If there are any additional fees resulting from this  
communication, please charge such fees to Deposit Account  
No. 16-0820.

Respectfully submitted,

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October 18, 2006

Claims Appendix (37 CFR § 41.37(c)(1)(viii))

35. A wetness indicator to be exposed to an environment to monitor the presence of a fluid in the environment, said wetness indicator comprising a multiple layer composite of a first ink layer applied to a second ink layer, said first ink layer being disposed between said environment and said second ink layer to control fluid contact with at least a portion of the second ink layer, said second ink layer containing a pH indicating agent that provides a visual indication in response to contact with said fluid and at least one of said layers containing a fluid regulating additive to regulate fluid contact with said pH indicating agent in said second ink layer, said fluid regulating additive being selected from the group consisting of silica gel, superabsorbent polymers, cellulosic resins, anhydride resins, polyolefin blend resins, zeolites, calcium oxide, clays and calcium sulfate.

43. An indicator as in claim 35, wherein said composite is part of an absorbent article worn on a user's body.

46. An indicator as in claim 35, wherein said fluid regulating additive is a zeolite, said fluid comprises

molecules of a first size and said pH indicating agent comprises ~~molecules of a second size larger than said first~~ size, said zeolite having a pore size that allows the flow of fluid therethrough but obstructs the flow of said pH indicating agent contacted by said fluid to thereby reduce bleed of said pH indicating agent from said second ink layer.

51. An indicator as set forth in claim 35, wherein said first ink layer is impermeable to said fluid and thereby prevents fluid contact with said portion of said second ink layer.

52. An indicator as set forth in claim 35, wherein said first ink layer is microporous and thereby lessens and/or delays fluid contact with said portion of said second ink layer.

53. An indicator as set forth in claim 35, wherein both said first and second ink layers each contain fluid regulating additive.

54. An indicator as set forth in claim 35, wherein said second ink layer is a substantially continuous film of

polymer having said pH indicating agent and fluid regulating additive dispersed therein.

55. An indicator as set forth in claim 35, wherein said first and second ink layers each have a weight of from about 2 gsm to about 105 gsm and a thickness of from about a fraction of a mil to about 6 mils.

56. An indicator as set forth in claim 35, wherein said second ink layer contains from about 0.1% to about 25% of said pH indicating agent based on the weight of the second ink layer.

57. An indicator as set forth in claim 35, wherein said fluid regulating additive is a zeolite having a pore opening size that restricts the passage of a molecule larger than a water molecule.

58. An indicator as set forth in claim 35, wherein said first and second ink layers each comprise a substantially continuous film of polymer having a weight of from about 2 gsm to about 105 gsm and a thickness of from about a fraction of a mil to about 6 mils, said second ink layer contains from about 0.1% to about 25% of said pH

indicating agent based on the weight of said polymer forming said second ink layer, and said fluid regulating additive is dispersed in at least one of said ink layers.

59. An indicator as set forth in claim 58, wherein said fluid regulating additive is a zeolite having a pore opening size that permits the flow of fluid into said second ink layer to contact said pH indicating agent and restricts the flow of said pH indicating agent contacted with said fluid from said second ink layer into said environment.

Evidence Appendix (37 CFR § 41.37(c)(1)(ix))

None.

Related Proceedings Appendix (37 CFR § 41.37(c)(1)(x))

None.